

432 MHz MHz AND ABOVE EME NEWS

JANUARY 1998 VOL 26 # 1

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EME NETS

14.345, 10 AM ET SATURDAYS, AFTER VARO NET SUNDAYS:

- NET CONTL: JOE, K1RQG (207-469-3492), E-MAIL: [Joe, K1RQG](#)
- EME STANDINGS: JIM STARKEY, W0KJY, 3845 CAPITOL DRIVE, FT. COLLINS, CO 80526, (970) 226-0669)
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CONDITIONS

Those who did not make it on for the Dec SW missed some great conditions on both 70 cm and 23 cm. Activity continues to build on the higher bands. During Dec N4NW in VA joined the ranks of those completing EME QSOs on 10 GHz. W5ZN in AR became QRV on 5.7 GHz. We also have details in this NL of JA7BMB's 5.7 GHz QSOs. Jan should be an interesting month besides the regular SW on 10/11 Jan many NA stations are gearing up for EME activity during the ARRL's Jan VHF Contest. The contest time is from 1900 on 17 Jan to 0400 on 19 Jan. The exchange is 4 digit WW locators (e.g. FN31).

SSB EME CONTEST

There has been considerable discussion on contest dates and how to increase EME activity - see the end of this NL. WA8WZG is working on the details of a microwave only EME contest. As an experiment this NL is sponsoring a 23 cm SSB EME Contest for the Feb SW. The contest will be on Sunday (Z) only. Scoring will be contact points times number of Grid Sectors (e.g. IO, JM, FN, ...). SSB to SSB contacts will count as 2 points. SSB to CW (or CW to SSB) 1 point. The exchange is your Grid Sector. If this works out a similar contest can be tried on 70 cm.

7M2PDT

Shukou made initial #100 on 432 during the Dec SW -- It took 2 years since my signal was 1st hear on the Moon to make #100. On 9 Dec I worked KN6M for initial #99 and then JA6CZD for #100. Also QSO'd were on 12 Dec JA5OVU, G4RGK, I5CTE and G4ERG, on 14 Dec K3HZO #101, W7QX, DL4KG, OE3JPC #102 and W5ZN #103, KB3PD #104, JA4BLC, K1FO, JA5NNS #105, IK2EAD #106, DL8OBU, DL3EAG #107 and SM2CEW, and on 16 Dec DL4XX #108. Heard were NC1I, JA9BOH, JH0YSI, DF3RU and JA2TY. I will not be able to be QRV for the Jan SW due to a vacation.

DL3EAG

Stephan send a "quick" report on his activity during the Dec SW -- I worked NC1I with very loud signals (439/539) on random and N9AB on sked (M/M) despite blockage from my 10 GHz dish. On Saturday afternoon I took down the dish and had contacts with JA5OVU (439/549) and K1FO (439/539), and on Sunday with SM2CEW (429/429) and 7M2PDT (O/O) on random - an earlier sked with him was not successful. I am now up to initial #35. I'm looking forward to meeting all the EME group in Paris this summer.

DL9EBF

Hans-Peter is a new EME station on 70 cm EME according to Stephan, DL3EAG. Hans-Peter is a friend of Stephan and lives about 20 km from him. He has set up an 8 x 21 el F9FT yagi array, but has still some problems with coupling which should be fixed soon. During the ARRL contest he QSO'd N2IQU. His power is 750 w from an K2RIW PA with 2 x 4CX250s and 0.7 dB NF with an MGF1302. [TNX DL3EAG for this report.]

DL9KR

Jan writes -- Since June I made less than 10 QSOs including initial #670 with W5ZN. Both parts of the contest were worked with flawless equipment and in mostly acceptable WX conditions, except 16 Nov when heavy rain showers through my SWR to abnormal values. My stateside windows displayed one-way skip practically all the time, leading to the loss of several contacts such as with K7XC and possibly W6ZLV who called me with a good signal, but suddenly disappeared. W6WE, W3ADO and K3HZO were other getaways. I estimate that my fixed polarization caused a total loss of about 10 contacts. Yet in the end the contest was another pleasant event and went well due to 3-4 hour sleeping periods in the presence of the Moon. The following contacts were accomplished on 18 Oct VEIZJ, 0N50F, S57Q, S52CW, G3SEK, CT1DMK, G4RGK, EA3DXU, G4ALH, UA6LGH, ON4KNG, G4ERG, YL3AG, VE1ALQ, OZ4MM, DK3FB, F1CH FOR initial #671, N2IQU, 12COR, UR5LX, F1ANH, OE5JFL, K1FO, RA3LE, EA8FF, LU4HO, DL9NDD, Y021S, N9AB, K20S, SM3BYA, K9BCT/4, DH5ANH, K2UYH, OH2PO, W8MQW, KF0M, VE6TA, UT5DL, W6VPH, KL7HFQ, K5AZU, W7CI, HB9SUL, KA0RYT, OE3JPC, K5GW, F5AQC, G3HUL, W7FN, W7QX, W0KJY, WA7BBM, WB6IMC, DF3BU, JL1ZCG, DL4KG, JA2KRW, JJ1NNJ, JR9NWC, 9M2BV, DL6NAA, S51ZO, DL4MEA, JA4BLC, JH1EFA, UT5EC, HB9SV, EA2LY, VK2BE #672, DL1HTT, JH4JLV, J0RNL, DL3EAG, JA2TY, ZS6PT, DK3WG, I5TDJ, JA50VU, JA9BOH, PA2CHR, JS3SIM, PA3CSG, GM3JFG, JA5NNS, IW5AVM, OE5EYM #673, UA4API, EA3UM, and G3LQR, on 19 Oct SM3AKW, N4GJV, WA4NJP, K4QI, G3LTF, K0RZ, KD4LT, W6DF, W7HAH, OH2BYJ (4 x 38 and 30 w) #674, N2HLT #675, HO3A, KB3PD, WI7Z, WA7TZY, KB8ZW, W7KK/6 #676, G4FUF, WB4BKC #677, K1OR #678, GM3JFG dup, DK8VS, I5CTE, JA3SGR, DF3RU, DJ2PA, on 15 Nov S52CW dup, DL80BU, W3XS, KN6M #679, W5ZN, WD5AGO, SM2CEW, DL4XX, K5WXN, NA4N, W6ZL disappeared, F1CH dupe, F2TU, EA2LY dup, HA1YA, IK5WJD, 7M2PDT, GM3JFG dup, UA4API dup, IN3KLQ, JJ3JHP, OM1TL, OH5 IY, and JI3GER #680, and on 16 Nov WB0GGM, W1ZX, DF4UE #681 and OE3XUA/3. Other getaways were UT1PA (disappeared), K5JL (was sleeping), JF3HUC and IK0EHQ.

F1CH

Dave (F5SDD) reports that F1CH is new station on 432 EME from JN23vf. They have 4 x 26 el yagis and 600 w. Operators were F5IVP and F5SDD in the contest. They should be QRV again for the Jan SW.

F6CGJ

Louis spent all his time on 1296 during the ARRL Contest this year. He had good luck with the WX on both weekends - a wind storm arrived just after the end of the 2nd part of the contest - and achieved a score of 70x35. He found conditions pretty much the same as last year. His station consists of an 8 m dish and 2.5 kw HPA. Tracking was manual this year as a result of a recent lightning strike. Louis notes that manual tracking is a good way to stay awake late at night.

G3LTF

Peter had a quiet month after the excitement of the con- test, but had some success on 13 cm -- On 12 Dec I went on 432 and worked UR5LX, N2IQU and DL8OBU for an initial. Heard were NC1I, G4ERG and K1FO. I was on 2304/2320 and worked on 13 Dec OH2AXH for initial #12 and heard HB9SV with good copy and called him on 2320 with no reply, and on 14 Dec ZS6AXT for initial #13. These are both 1sts from the UK. I'm happy to take skeds on 2320/2304 and I have a xtal on the way for 2424 to try with JA. The system seems to be fairly good now and I'm working to increase my power from the present 30/40 w at the feed. On 14 Dec I was also on 1296 and worked NL7F for initial #131. NP4B was there on sked, a bit low in frequency but (349) copy, but he quit after 2 periods apparently not hearing me? VE6TA was a good signal as were DJ9YW and CT1DMK. Peter plans to be in Paris this summer.

G3SEK

Ian did very well on 432 in the ARRL Contest -- I worked 80x32. This was way above my expectations - mainly thanks to the good activity. Over the 2 weekends I added 13 initials with S52CW, SM3BYA, F1ANH, WI7Z, F1CH, W5ZN (state 42), KN6M, JA2TY, JJ1NNJ, KL7HFQ and K7XD (my only sked in the contest), DL4KG and DL4MEA. Next year's target has to be 100 QSOs, so I have started serious work on a YL1050 PA. My standings as of Dec 97 are initial #275, 54 countries and 42 US states. Nadine and myself are looking forward to seeing all in Paris next year!

G4ERG

Peter found conditions and activity quite good for the Dec SW -- I worked on random 7M2PDT (449/449), UR5LX (559/549), G4RGK (O/O), N2IQU (559/549),

DL8OBU (O/O) for initial #94, NC1I (569/559), K1FO (559/449), SM2CEW (559/549), VE1ALQ (549/449), DF3RU (449/429), JA5OVU (559/549) and JH0YSI (O/O) #99. Worked on sked were W5ZN (O/O) #95, JA4BLC (O/O) #96, DK3FB (O/O) #97, EA3DXU (M/O) #98, partial DL3EAG (M/M), partial JA2TY (O/-), YO2IS nil and K3HZO nil. CWNR were KN6M and K5WXN. Also heard were DK3WG, DL9KR, DL4MEA, JS3SIM, OE3JPC, IK2EAD and JA9BOH. Peter wants skeds.

G4FRE

Dave (WW2R) is now in VK as VK2IDR, but will be there only until Xmas and writes -- There is a good possibility of a longer stay in the new year, if this happens the EME system that moved with us from NJ (and has still to be unpacked!) will come with us. If the VK return doesn't come off, we are moving to Dallas. This time we will look for a moon window rather than a good microwave takeoff!

GM3JFG

Iain reports that he is now 84 years old and even though he is living up to his name (MacHardy), he does not take kindly to late night skeds. Reverend Canon is Iain's Title, being a minister in the Episcopalian church, now retired. Beech Tree Cottage is his house name. Formerly a farmhouse. Located on the Black Isle near to Rosemary Television mast and just above the Nig Ferry. A nice VHF location but rather draughty! His Post Code is IV11 8XY not IV2. Iain has worked 21 countries off the Moon as of Nov 97. With the recent addition of Down East Microwave driver to his RIW PA, his power out is a comfortable 900 w. Iain complains that he is still unable to hear his own echoes. He would love to double his 4 x 21 el yagi array, but this would require the assistance of some local enthusiastic amateurs. Last SW, 13- 14 Dec Iain heard 7M2PDT off the Moon and was initially puzzled as to where 7M2 was, more used to hearing JAs. Unfortunately Shukou got away because his normal equipment was not set up. [TNX Jon, GM3JIJ for passing on this report.]

HP3XUG

Louis writes -- Although I had asked last month for no skeds, it worked out OK. I missed my 1st sked with W7QX on 13 Dec - too early as I had just returned from TI. The next morning was on trying with JA9BOH with nil results, when W7QX called and we had a nice short QSO. I was listening afterwards on .040 and thought I heard W5ZN, then got JA9BOH as the Moon made its final bow for the day. On 14 Dec I had a sked with W0KJY, but I am not sure why, as we had QSO'd previously. But was able to be on, and only heard him (O) copy. I did have a nice quick (559) QSO with NC1I. I also copied a few others, but had nil results on my

sked with **7M2PDT**. The power meter shows 500 w and I can usually get some weak echoes almost all the time.

JA7BMB

Hiroshi reports on his side of the 1st JA/W 5760 EME QSO made on 12 Nov at 0800 with **WB5LUA (M/M)**. This was followed by a 2nd QSO on 14 Nov at 1900 with **SM4DHN (529/549)** and (33) copy on SSB. He is using a 6 m dish with only 10 w at the feed from an FLM5964 GaAs FET with 12 v on the drain. He hears 10 dB of Sun and .5 dB of Moon noise. Echoes are (T-M) copy.

JA9BOH

Kimio remains QRV on 432, besides working hard on 144 EME -- I worked on 7 Dec at 0455 **7M2PDT** and **0500 JA8ERE** for initial #289, on 12 Dec at **0951 NC1I, 1013 W7QX, 1920 DK8VS** and **1949 DL8OBU**, and on 13 Dec at **1037 JH0YSI, 1113 W5ZN #290** and **WAS 42, JA5NNS #291** and **1327 W7QX**. I held the Central Japan EME Conference at Izumi-village in Fukui-pref on 23/24 Nov with the help of **JR9NWC, JA2TY** and **JA0BZC**. Attendants were **JH1KRC, JA2TY, JH2COZ, JA2KRW, JA3MKM, JA3MKS, JF3HUC, JF3MOK, JG3UVN, JH3BJN, JJ3JHP, JS3SIM, JR6EMD/3, JA7BMB, JA9BOH, JR9NWC, JA0BZC, JA0EIV, JA0RWF** and **JH0WJF**. The conference included an outstanding surplus swap, NF measuring contest and a banquet. The highlight of the conference were lectures on 6 cm EME by **JA7BMB** and **The How To of UHF HPA Construction by JA0EIV**. I want to thank **K9EK** and **W7QX** for providing the material for this conference. Some snap shots were taken and placed on **JF3MOK's** home page at: **JF3MOK**

We want to make this conference an annual event. Central Japan includes the **JA0, JA2** and **JA9** call areas, but all EMEers are invited to attend.

JL1ZCG

Yun (JL1ZCG) reports that his group, Nakayoshi QRP Club, (mailing address 4-8 ASANO-CHO KAWASAKI-KU, KAWASAKI-CITY, 210 JAPAN), is now QRP on 1296 as well as 432 and 144. On 1296 they are using an array of 32 commercial 30 el 10 wavelength yagis. They believe the array gain is about 32 dB, the equivalent of a 4 m dish. On TX they had a 6 x 2C39A ring amplifier. They made 32 QSOs on 1296 and feel they could have done better, but had problems with QRM from the 3rd harmonic of their 432 transmitter. They installed a 60 dB rejection low pass filter in the 432 PA for the Nov part of the contest which helped greatly. They also note that because of the timing/Moon position this year, they had less time to Eur. Overall results were 224x89 with 63x30 on 432 and 32x21 on 1296.

K1FO

Steve finally has his full 1997 EME contest report. He is using computer logging and was trying to find and easy way to paste his log into his newsletter report. What he needs is an editor under Windows95 (or DOS) that can perform column manipulation (like VI for UNIX). He finally ended up pasting his log into Lotus AmiPro and used the find and replace function to cut out the unneeded info. and paste in the right delimiters "(/)," for the newsletter. By the time he was done it may have been just as easy to type the calls into his report. Stations QSO'd in the contest were on 18 Oct F1CH (449/O), CT1DMK (549/559), VE1ZJ (449/569), S52CW (449/559), HB9SUL (559/559), G4ALH (449/559), VE1ALQ/9 (569/559), KD4LT (559/559), K9BCT/4 (449/559), G4RGK (559/559), OZ4MM (559/579), W8MQW (549/569), ON4KNG (559/559), EA3DXU (449/549), N9AB (559/569), K4QI (579/569), I2COR (569/579), DK3FB (449/559), DL9KR (579/589), G4ERG (559/569), DL9NDD (569/579), SM3BYA (459/569), 0221 W3ADDO (549/549), WB2VVV (439/559), K2OS (549/449), DH5NAH (439/O), G3SEK (559/559), OH2PO (579/579), OE5JFL (579/579), DK3WG (559/559), F1ANH (579/569), VE6TA (439/559), UA6LGH (549/569), KB3PD (449/569), W7CI (569/559), UT5DL (549/569), YO2IS (339/559), K5AZU (569/559), UR5LX (579/579), WB6IMC (569/579), W6VPH (559/569), WI7Z (559/559), I5CTE (549/559), W7QX (559/449), KL7HFQ (449/549), I5TDJ (549/459), WB4BKC (449/O), K5GW (569/569), PA2CHR (559/O), KB0TZA (559/559), IN3KLQ (449/559), WA7BBM (449/559), K0RZ (569/569), DL8OBU (449/439), ON5OF (O/O), DK3BU (569/579), S51ZO (439/549), F5AAC (559/559), G3HUL (439/559), W7FN (559/569), HO3A (439/549), JA2TY (449/O), JR9NWC (449/559), JH4JLV (449/559), JA2KRW (559/579), JJ3JHP (M/M), KB8ZW (559/559), JH1EFA (O/O), JJ1NNJ (439/559), JA9BOH (549/559), JL1ZCG (569/569), JJ3JRK (O/O), JI3GER (M/M), N2IQU (579/579), N2HLT (439/O), JA5OVU (569/579) and JA5NNS (M/O), on 19 Oct SM3AKW (559/559), EA8FF (549/559), ZS6PT (O/O), S57Q (449/O), DJ2PA (449/449), UA4API (O/O), NA4N (549/569), EA3UM (549/559), UT5EC (449/559), G3LTF (559/569), G4FUF (549/559), DL6NAA (439/559), N4GJV (579/579), W6DF (559/559), DL4MEA (549/O), OE3JPC (439/449), DL4KG (549/549), W6WE (549/559), W0KJY (559/569), W7HAH (559/559), 0654 DL3EAG (O/549), WA7TZY (559/559), W7KK/6 (439/559), JA3IAF (449/569), KF0M (439/539), JA4BLC (449/559), JS3SIM (549/559) and 7M2PDT (549/549), on 15 Nov OE5EYM (549/559), DL8OBU (449/459), UA6LGH (559/569) and S52CW (439/559), on 16 Nov HA1YA (559/559), GM3JFG (O/O), KN6M (559/549), WB0GGM (439/449), K5WXN (549/559), DF3RU (559/559), W1ZX/3 (569/559), IK5WJD (549/569), WD5AGO (559/559), K1OR (439/O), JO3RNL (549/559), JR1RCH (439/O), JA6XED (449/559), JH7PAV (O/O) and JA3SGR (M/O). Steve found conditions exceptional in Dec. Stations worked were on 07 Dec I5CTE and DF4UE (449/559) for initial #525, on 12 Dec DL8OBU and KA0RYT, on 13 Dec G4ERG, K5WXN, N2IQU, K7XD (M/O) #526, G3SEK, DL3EAG, DK3FB, DL9EBF (439/419) #527, on 14 Dec NA4N partial, G4RGK, S52CW partial, NC1I, KN6M, N2IQU,

W8MQW, W7QX, JA4BLC and 7M2PDT, on 15 Dec S52CW and DK3FB, and on 20 Dec JA5OVU and JA3SGR. In regards to the questions regarding VE1ALQ(/9)'s status. Several years ago New Brunswick was split from Nova Scotia into separate call areas. Nova Scotia stayed VE1 and New Brunswick became VE9. Existing New Brunswick amateur licensees were given the option to keep their old VE1 call or get a new VE9 call. Most (like Darrell) chose to keep their VE1 call. Based on VE1ALQ being the same station in the same QTH, Steve doesn't believe that VE1ALQ can be considered an initial as it is the same equipment in the same location. EME operators should also look for EME activity during the 1998 ARRL VHF Sweepstakes. 70 cm EME totals for K1FO are now #527 initials, 49 states and 75 DXCC.

K4QI

Russ had more weather problems during the 2nd part of the ARRL contest which severely limited operating time -- It got so windy on 16 Nov that I just had to shut the 1296 operation down. I QSO'd on 432 on 15 Nov EA8FF, DF3RU, SM2CEW, WD5AGO, S57Q, K5WXN, W6VPH, S52CW dup, W5ZN, KL7HFQ, OE5EYM, DK3BU, I5TDJ and IK5WJD, and on 1296 on 16 Nov F5AQC, F5PL, OH2AXH, HB9BBD, OK1DFC, EA3UM, K2DH, ON4RR, S59DCD, OE9ERC, ZS6AXT, N2IQU, W4OP, K5JL, 4X6UJ, WB5LUA, W4RDI, K9BCT/4, G3LQR, LA8LF, DD0SB, CT1DMK, F6CGJ, WA4OFS, W0KJY, OE9XXI, G3LTF, F2TU, K2UYH, VE1ZJ, SM4DHN and N6BQ. I was on 1296 on 13 Dec and worked KB2AH, DJ9YW, W2UHI, K5JL, N2IQU and W4RDI; all in about 20 minutes and after that no other signals were heard - conditions were excellent with virtually no libration, and on 14 Dec 14 OK1KIR, W2UHI, CT1DMK on SSB, S59DCD on SSB, VE6TA and KD4LT. Conditions were again excellent! [Russ will be only on 432 in Jan.]

KD4LT

Scott reports great activity during the Dec SW. On 70 cm he added an initials with KN6M, and on 1296 OK1KIR, NU7Z, K4QI, OZ4MM, VE6TA, K9BCT, NP4B and 9H1ES. During the pre SW he QSO'd WD5AGO, WA8WZG, DJ9YW and LA8LF. This brings Scott to initial #22 DXCC 11 and WAS 11 on 23 cm.

LA8LF

Anders worked Oct. 18th. on 13 cm JA4BLC (569/439). He has now worked Yoshiro on 200, 70, 23 and 13 cm EME. He is up to initial #9 on 13 cm and with only 16 w at the feed. Anders plans to be back on 2300 with more power during the DUBUS/REF Contest. On 23 cm he worked on 7 Dec DJ9YW (549/559), CT1DMK (549/559), VE1ALQ (559/559), KB2AH (589/579), K5JL (579/569), K9BCT/4

(O/559) for initial #105 and KD4LT (449/559) #106, on 13 Dec GW3XYW (559/559) and S59DCD (559/569), on 14 Dec NP4B (O/579) # 107, K5JL (579-579), K2UYH on SSB (55/55), KB2AH on SSB (56/56), VE6TA (339/449), NU7Z (439/549), W0KJ (449/549) and NL7F (449/559), on 20 Dec DJ9YW (549/559). nil PY5ZBU on sked due to problem with tuning procedure - he heard. me (549) on my last sequence, and on 21 Dec DJ9YW (559/559) and nil PY5ZBU due to stormy WX at Don's end. Anders will be on 23 cm only for the Jan SW.

LU6DW

Marc is part of a group consisting of himself and Dany, LU8EDR and Willy, LU4DHD, who are working on 1296 EME. They have a surplus 3.6 m dish, and using a preamp with an MGF1302 measure Sun noise on 1.2 GHz. They use a short helix as the feed for the dish and want to know the polarization sense of the helix needed to listen for signals during Jan SW? [A helix feed is not a good choice on 1296. Although circular polarization is used on 1296, right hand circular is used on TX and left hand circular on RX. This because the sense of the circular pol is reversed on reflection from the Moon. The popular IMU and VE4MA feeds do this reversal automatically. A helix maintains the same sense on both RX and TX. One way around this problem is to use 2 helix feeds, one right and the other left, and mechanically move their position relative to the dish between TX and Rx. To receive left hand circular pol signals you want to use a right hand helix as the pol sense is reversed by the dish reflector.] Marc can be reached via e-mail at: LU6DW

N4GJV

Ron reports that he had made enough of a recovery from his recent surgery to devote more time to EME during the Nov contest weekend, after being restricted to a very limited session during the Oct weekend. He did find that he still "runs out of steam" rather easily, and had to take several "breaks" for needed sleep and rest. However, Ron reports that he had a good time, and regrets that he is unable to be more active than he has been. He QSO'd on 15 Nov OE5JFL, G4ALH, UA6LGH, F1CH for an initial #, DK3FB, SM2CEW, KD4LT, KN6M #, K5WXN, W5ZN #, WD5AGO, G4FUF, KL7HFQ, G4ERG, WB0GGM, SM3AKW, K1OR #, DK3BU, DL4KG, I5CTE, ON5OF, DL3EAG, W7FN, I5TDJ, IK5WJD, DF3RU, EA2LY #, G3HUL, WA7BBM, EA3DXU, G4RGK, K2UYH, W7GBI, JS3SIM #, JA2TY, JR9NWC, 7M2PDT, W7HAH, and JA9BOH, and on 16 Nov I2COR, S52CW #, DL4MEA, HA1YA, VE1ALQ, GM3JFG, DK3WG, YO2IS partial- vanished, NA4N, OE5EYD, W7KK/6 #, WA7BBM, KF0M, G3LTF, S51ZO, DL5FN #, JH1EFA, JR1RCH #, JO3RNL and JJ1NNJ # for a total of 94 x 29. Got aways during the 2 weekends include HB9SUL, W1ZX, DL9EBF, JH4JLV and YO2IS.

N4NW

Dave has made the 1st 10 GHz EME contact from Virginia -- On 8 Dec I worked **WB5LUA (TX)** via moonbounce on 10 GHz. This was my 1st QSO on 3 cm EME as well as the 1st from VA. My station uses an 8' offset dish and 8 w!

NC1I

Frank writes -- After nearly a full year of inactivity I finally have made repairs to my array and returned to EME. Not only is the array back up on the tower and working, it appears to be performing better than ever! Unfortunately despite my efforts I was unable to find the time to make the repairs in time for this year's contest. My array performance had been slowly deteriorating since I 1st got it into operation. In fact, it probably was not quite 100% from the beginning. As mentioned in a previous NL, the 12 LDF4-50 phasing lines were originally installed without a connector at the open wire junctions. This was done to facilitate the junction itself as well as to avoid performance problems with the copper sleeve baluns. The open ends of the Heliax were sealed with several coats of clear enamel spray, While this may not have been ideal, it seemed to work at the time. I suspect prolonged UV exposure broke down the enamel and exposed the Heliax to moisture. As you may recall shortly after the array was originally put up it collapsed and then remained on the ground for over a year. For several months it was buried in snow and ice. For this reason I suspect it suffered from minor water penetration from the beginning. Last February the problem became extreme and it became obvious the phasing lines would have to be replaced. Subsequent measurements revealed SWRs as high as 3/1 on over half the lines. The Heliax to open wire junction has been redesigned utilizing a quarter wave length of UT250 soldered directly to the open wire at one end and an N connector installed at the other end. The copper sleeve balun is then fitted over the UT250. This also allows the phasing lines to be assembled with a standard N connector at both ends. I am still relying on the spray enamel to seal the open end of the UT250, however I suspect the risk is low as the Teflon dielectric will not saturate with water. Perhaps a couple of fresh coats every year will help maintain a good seal. Thanks to N1DPM and K1FO for their technical help and to KA1QFE for assisting with the silver soldering and tower work. Sun noise measurements made over the activity weekend yielded a little over 19 db. These measurements were made using a backup preamp. Sometime while the array was on the ground my cavity preamp blew a regulator and I did not discover it until the array was back up. I'll have the cavity preamp back in line by the next SW weekend and take some new Sun noise measurements at that time. I felt that activity was a bit sparse over the Dec SW. Although I did make quite a few contacts, I spent a lot of time on. I also struggled with finding the correct transmit polarity. My log reads as follows: on 11 Dec **0259 N2IQU (589/589)**, on 12 Dec **0240 WI7Z (449/559), 2307 G4ERG (559/569) 2320 DL80BU (549/439) 2330 KAORYT (439/559)** and **2358 NA4N (559/569)**, on 13 Dec **0218 W7QX (559/449), 0233 DL9NDD (569/569), 0244 K5WXN (559/579), 0323 W3XS (449/579), 0447 DL3EAG (539/439), 0456 DF4UE (549/559), 0507 KL7HFQ**

(549/559), 0900 JA3SGR (439/539), 0916 JA2TY (569/559), 0932 JH1EFA (549/579), 0940 JS3SIM (579/559), 0950 JA9BOH (569/579) and 0959 JA6CZD (549/569), and on 14 Dec 0205 KN6M (539/569), 0211 K1FO (579/579) - Steve said I was peaking (589) at 30 degs pol, 0242 W8MQW (569/579), 0300 HP3XUG (549/559), 0355 DK8VS (449/549), 0405 IK2EAD (559/559), 0414 VE1ALQ (579/579), 0440 K7XD (449/O), 1027 JHOYSI (559/579), 1055 JA4BLC (569/579) and 1110 WB2VVV (539/549). I noted several stations using fairly high speed CW with short spacing between characters. I'm really not sure what their hurry was, but I would think it would be beneficial to slow down a bit and substantially increase the spacing. Perhaps it's time to revisit this issue. I would also like to encourage everyone to get on for the ARRL January VHF Sweepstakes, I will be active off the moon on 18 Jan between approximately 0700 and 1000. Don't forget the exchange is grid squares. Any QSOs will be greatly appreciated. WX permitting I also plan on being on for the next SW.

NL7F

Bill writes -- Without a contest going on I have much less activity to report. I QSO'd on 23 cm on 14 Dec on sked G3LTF (559/559) for initial #35 and DXCC 13, at random LA8LF (559/449) and JH5LUZ (439/429) I'm always open for skeds and can be reached via e-mail at:

[NL7F, Bill](#)

OZ4MM

Stig found great signals, but not too great activity during the Dec SW on 1296. He worked on 14 Dec GW3XYW (559/559), F1ANH (569/559), K5JL (569/569), KB2AH(579/569), KD4LT (549/569) for initial #130, NU7Z (549/559), K2UYH on SSB (55/55), KB2AH on SSB (56/56) and NP4B (449/569) #131.

PA0JCA

Jan (PA0JCY) reports a very bad time during the Dec SW - - We had an elevation drive problem and had to run el manually. Initially we copied CT1DMK for short period, but heard nil on all our skeds afterwards. We tracked the Moon using indicators and could not visually check the Moon's position since the sky was cloudy. Later we had some visible Moon and found the dish position was at least 3 degs off. We were also unlucky in frequency choice. There was a birdie just below .040! This was killed after a while as it was coming from our 13 cm rig. We are still using a linear feed, since we originally had bad results with our W2IMU horn. We hope to have better luck next time and will try again in Jan.

PY5ZBU

Don writes that he is now active on 1296, but with only low power for the present.
At the time of his letter Don had completed QSOs with N2IQU, K2DH and W2UHI using only a 35 brick amp in the shack with his 5.5 m (.37 f/d) dish! Don's PA is now a pair of N6CA water cooled cavities. He has a YL1050 HPA using a DF6NA cavity just about ready to go. He has had problem with the YL1050 screen power supply, but now believes he has the amp "tamed". Don says he is hearing very well and will be looking for skeds during the coming year.

VE6TA

Grant heard 2 out of his 9 skeds on 23 cm. He worked S59DCD initial #57 and came close with NU7Z. He did QSO a bunch on random.

VK2FZ

Adrain is setting up for 1296 and 10 GHz. He has 2 dishes that appear portable. At the same time he is also in the process of moving QTH, about 20 km, and is temporarily QRT. He has no direct e-mail but be reached through or via telephone at 61+87 35 9014.

W5ZN

Joel reports the 1st 5760 EME contact from Arkansas! He worked WB5LUA using a 10' dish, 18 w, and a homebrew WR-137 to 1.5" copper pipe feed with coffee can scalar ring and Luacom preamp. Moon conditions were not good with the Moon at apogee, but the contact was fully completed after about 5 sequences. Joel also had good luck on 70 cm in Dec and completed all his skeds except for KL7HFQ - nil heard, and added 7M2PDT and JA9BOH. He is now QRV on both 432 and 5.7 GHz and looking for skeds.

W7QX

Jerry was active on 432 during the Dec SW and worked the 1st night K5WXN, NC1I, HP3XUG, JA9BOH and 7M2PDT, and the 2nd KN6M, W5ZN and JA5NNS for new initials, plus W8MQW, K1FO, JH0YSI, JA4BLC and JA9BOH. He had a partial QSO with DL9NDD and received QRZs from KA0RYT Jerry was really surprised at the signal from W5ZN, and thought conditions were the best Friday night, but all in all it was a good weekend.

WA7TZY

Fred was active during the contest and worked on 18 Oct N@IQU (559), OH2PO (579), F5AQC (559) and N9AB (559), on 19 Oct DL9KR (559), OE5JFL (569),

K1FO (559) and OH2PO (589), and on 16 Nov SM2CEW (559) and W7FN (559).
All contacts were on Random. Fred says he really enjoys and prefers working EME without skeds. He also asks about W8MQW's article on psycho-acoustic processing and wonders if anyone is making use of these techniques on EME?

ZS6AXT

Ivo missed all his Dec skeds due to bad WX. Regarding K1FO's comments on the effect of high northern dec during the ARRL EME Contest, he responds -- I calculated some Moon windows for a few areas on 15/16 Nov 97 as follows: SM2/3 17.5 hrs, W2 14.5 hrs, ZS6 13 hrs and ZS1 10.5 hrs. Do you still think that this is quite fair, even for stations in the N. Hem? I do not care about your common window, it is the total theoretical Moon window of stations south of the equator I am concerned about, and which counts in the end for me. In all of my comments I did not ask for a weekend with S. dec, since I realize that great majority of EME stations are in the North. I asked for elimination of the handicap for us here, "down under". [I do not think that anyone disagrees that there are advantageous and disadvantageous to different geographic locations. A solution is not so obvious. Steve's point was that you can have a very large Moon window time wise, but if no one else is active during that window, what good is it? If the contest were run on a weekend with a high southern declination, you would have many hours of Moon time. But after you worked the few other stations active in the S. Hem, what good would the time do you. The valuable time is when the Moon is common to Eur, NA and JA. And this period does not change much whether the Moon is at a Northern or Southern dec.]

K2UYH

I had a bad cold and missed operation on 70 cm on Saturday. I was QRV on 23 cm on Sunday morning, but had lots of problems. When I turned on the station, I discovered that my preamps were not functioning. There was no dc voltage getting to the preamps at the feed. After almost 25 years there were no spare lines to steal, so I had to run a makeshift extra wire out to the dish. When I finally got on, I almost immediately QSO'd at 0115 **DJ7YW (559/569)**, but then noticed no one was responding to my calls. I discovered a near infinite VSWR. The jumper cable from my hard line to the horn had gone bad! I replaced it and was back on in plenty of time for my 0300 9H1ES sked. But heard nil. Tom, KB2AH listened in and heard nil too, so it wasn't another problem at my end. I QSO'd at **0328 OZ4MM (56/56) on SSB, 0335 KB2AH (56/56) on SSB, 0346 LA8LF (55/56) on SSB, 0408 K5JL (559/559), 0425 VE6TA (549/559), 0425 W0KJY (44/55) and 0500 partial PA0JCA (M/-)** - they were several kHz low in freq and not always present. **S59DCD** was also heard with an excellent signal on SSB. We have to be out of town for business on the Jan SW but will only be able to be QRV on Saturday morning.

NETNEWS

F5SDD's e-mail address is:

[F5SDD](#)

and F5IVP is:

[F5IVP](#)

Both are QRV on 70 cm EME.

VE1ZJ had storm damage and lost his 2 m antennas, the rotor on his 70 cm array and the mount for his 23 cm dish.

K2DH completed WAC on 23 cm by QSOing PY5ZBU. Dave needs QSLs from VE3BQN, HB9BHU, I5MPK, SM5DGX, DK7LJ, S59DCD.

W2UHI also worked PY5ZBU. During the SW he QSO'd 15 on 23 cm, but missed the JA window.

CT1DMK was unable to be QRV on 70 cm in Dec. Luis did work on 23 cm WA8WZG and has partial with W0KJY.

N2IQU worked PY5ZBU and KD4LT on 23 cm.

W4RDI QSO'd KD4LT on 1296.

RV4AQ has increased his power and will be on during the SW on random.

DF3RU ended the contest with a total of 89x43, on 70 cm 66x27 and on 23 cm 23x16.

ZL1UE, Malcom expects to be testing on 23 cm EME next year.

DK5JL completed with 9H1ES on 1296.

VE1ALQ also worked 9H1ES and PY5ZBU on 23 cm and added IK2EAD and W7KK on 70 cm.

WD5AGO was on 23 cm in Dec, and plans to be on 70 cm in Jan. He will be on 70 cm the 1st night and 23 cm 2nd.

WB5LUA worked PY5ZBU on 1296. His standings are now on 33 cm #5, 2 DXCC, 3 WAS, on 23 cm #152, 35 DXCC 27 WAS, 13 cm #39 19 DXCC 8 WAS, 9cm #3 3 DXCC 1 WAS, 6 cm #11 9 DXCC 2 WAS, and 3 cm #21 12 DXCC 6 WAS. Al is looking for skeds on all bands.

W4TJ is still basically just listening, but copied his own echoes with 200 w. Bill also has 10 w and a 12' dish good for 5760.

WA8WZG worked on 13 cm in Dec WB5LUA and OH2AXH (539/539) and on 23 cm CT1DMK and KB2AH on SSB. Tom is looking for skeds during the Jan VHF Contest on 70 cm, 23 cm, 13 cm and 6 cm EME. He will send a special certificate for those that QSO him off the Moon during the Jan VHF ARRL Contest.

KN6M, Mori is running 4 x FO 25 el yagis on 70 cm. His e-mail is .

NU7Z made initials on 1296 with VE6TA and KD4LT, but heard nil W0KJY. He is working on 10 GHz.

AA5C had equipment problems and had to scrub his I4CHY 10 GHz sked. Greg is always looking for new stations to sked on 3 cm.

KA0RYT completed in Dec on 432 with S52CW, NC1I, K1FO, DL9KR, IK2EAD for initial #93 and others. VE1ALQ was heard.

K5WXN has worked 7 initials in '98.

K6IBY's (DM13) reports his antennas (4 x FO24s) are all done and the FT-726 is now working with over 700 w out of the amp. He will take skeds for the Jan SW.

DL5FN is QRV on 432 with 8 yagis and 1 kw from JO40.

VE4MA's 10 GHz effort has been delayed by an unbelievable work schedule, very cold WX and a high loss problem with some of his EW-90 waveguide.

SM2CEW was on 70 cm and worked DL9EBF for an initial.

KL7HFQ did not work any of his skeds in Dec. He has problems with his feed and will be off until it is repaired.

FOR SALE

KB3PD has for sale a **432 MHz Arcos amp complete with power supply. It uses a pair of 8930's type tubes.** Call Rick 302- 737- 7966 for more info or e-mail to :
[Rick,KB3PD](#)

Asking price is \$US1100 plus shipping.

W3CPM has a **28 MHz-432 MHz Down East Microwave no tune transverter (KK7B type)** for sale. It is brand new. He won it at a conference. It comes with full documentation and QST review article. Price is \$150.00 plus shipping. Contacted Chris at 717- 299-7374 day, 717-569-3828 eve, or at: [W3CPM](#)

N7EIJ is looking for **3 30LBX yagis for 70 cm EME.** Respond via e-mail to: [N7EIJ](#)

WA8WZG has 8877 and 3CX800 tubes, hi-power RF parts ... door knob capacitors, etc. available for sale. He also has Andrew hard line and related connectors of all sizes and waveguide in stock. Contact Tom at:

Tom, WA8WZG

or:

WA8WZG's Home Page

or by telephone at (419)-732-2944.

KB2AH has a full line of cavity amps and 1, 2, 4 and 6 tube ring amps, lin/circular feed horns and LNAs for 432 and 1296. Tom also has mounting blocks for K1FO yagis. For full details see:

Tom's 1296 WEB page

for more details and pricing:

Info e-mail

or phone 908-223-5067, FAX 908-223-0901 (24 hrs) or voice 908-223-8124.

FINAL

Included with this NL is G3SEKs 1998 EME Calanader. I have indicated proposed SWs with an "*". These are proposed dates and subject to change based on your comments. So if you feel others are better, let me know.**

Rein, W6/PA0ZN who produces the WEB version of this NL (see the masthead), recently learned that many NL WEB users did not realize that the graphics portions of the NL are also available on his WEB site. All the pics from the last 2 or so years are in his antenna gallery. In the future he will put links between the NL and the corresponding NL graphics to insure that these portions of the NL are not mot missed. Rein also notes that he has a Chat page on the NL link. This feature provides virtual real time communication between the participants (keyboard that is). In the future he will feedback comments left on the Chat page for inclusion in the NL.

Those of you who use the NA 432 + EME BBS may have noticed an announcement of area code changes from 704 to 336 to start on 15 Dec. I tried to check into the BBS using the new area code after the 15th and could not get in, but found it worked fine with the old area code.

The discussion of ARRL EME Contest dates continues. ZS6AXT's comments appear in his report in an earlier part of this NL. The following is Steve's response primarily to my comments in the last NL: "I do not believe that it would be a wise idea to run the ARRL EME Contest and Sept VHF Contest on the same date. 1st, it will be impossible to put a serious effort into both contests. This will have the effect of forcing the serious operators to choose their contest. For me it would obviously

be the EME contest. There are quite a few North American EME operators who regularly put in big efforts in the VHF contests. For many of these VHF contestants, especially those who put a lot of energy in the bands above 432, the contests and tropo openings are the only times there is measurable activity on the higher bands in North America. These operators may choose to operate the VHF contest therefore diluting the number of EME operators. If they do get on EME it will most likely be for a short time thus limiting the opportunity of the EMEers to work them. 2nd, there will be QRM problems for those, especially for the stations in the northeast US, who choose to operate the EME contest only. How frustrating will it be if a weak EME station gets clobbered by a couple of tropo stations calling at the same time. I have had this problem when operating EME in the tropo contests even after putting in several hours on tropo and working over 150 stations on 432, I still get tropo calls when I'm on EME. If I haven't operated the tropo contest there will be many more tropo stations looking for a QSO with me. Even though the tropo activity is centered 80 kHz away, the aggressive contest op will sill find the EME stations down at .000 to .040. On 2 m there is still quite a bit of stateside tropo contest CW activity below 144.100 (the U.S. CW sub-band) which may directly conflict with the 2m EME operators. 3rd, even the more casual operators will be discouraged from trying EME as it will take away from their tropo contest time. With many of the single op contest stations on 7 bands, there just isn't enough time to cover all of them and still have time for EME. Finally, I have talked to a few of the local VHF/UHFers both serious and casual contesters. Everyone I spoke to was not receptive to the idea of running the contests simultaneously. I have been forwarded some of Ivo's (ZS6AXT) e-mail comments on the EME contest dates. Ivo (and several others over the years) have pushed for having the EME contest dates when the dec is near 0. The theory is that when the dec is near 0, all stations in the entire world will have 12 hours of moon time and therefore the contest competition will be equalized. Unfortunately, the issue is not quite so simple. What is of more importance is useable Moon window and even more important useable Moon window to parts of the world where there is EME activity. The majority of active EME stations on 70 cm and above are located in western Eur concentrated in latitudes between 45 and 50 degs with some stations as far north as 65 degs lat. An operator, like Ivo, who is located at -26 degs lat, may not fully appreciate the dynamics of the Moon position at high lat and low dec. Consider that many stations need at least 20 degs elevation for a clear view of the Moon. For example at 0 dec ZS6AXT will have a max el of 64 degs while DL9KR at 50 deg lat will have a max el of 40 deg and SM2CEW at 66 degs lat will have a max el of only 24 degs. Is this fair to all participants? Moreover, the useable window between Eur and the west coast of the US becomes almost no existent, if both stations require only a 10 deg minimum Moon el. I would also like to point out that I am one of the stations that is least effected by lower dec since my array is 30 m high giving me a clear horizon to horizon window. In fact, selecting lower dec weekends would most likely be a distinct advantage to me as I would have more useable Moon time than almost any active 70 cm EME station. Selecting EME contest dates should not be made with

preference to any one or any select few operators. The real objective in selecting the contest dates should be to benefit the greatest number of contest participants and therefore help to promote EME activity. Since the EME contests are restricted to weekend dates, we do not have the luxury of picking the very best Moon dates in a given month, but are limited to choosing the best weekend dates which almost always end up being a compromise. I performed some additional analysis on dec versus Moon window at various locations around the world. I concluded that a dec of about +10 would be the best compromise to equalize moon windows around the world while not unduly putting anyone at a huge disadvantage. Unfortunately, for 1998 there are no weekends that have around +10 dec. So the choice is between +18 dec or around 0 dec. Given those 2 choices, my conclusion is that the high dec weekends will benefit the greatest number of stations." I am pretty much in agreement with Steve on preferred windows. With my limited Moon window even a choice of 10 degs dec would severely limit my chances of working JA. I do not agree with Steve concerning the undesirability of running the Sept VHF and the EME Contests together. I guess I believe in trying new and different things. This year's combination of Moon geometry and available dates offers a unique opportunity to try something new. Contest operators with which I have discussed the possibility of combining the 2 contest dates were not against the idea. I guess it is in the way you explain it to them. Yes there will be some QRM, but I believe it will be manageable. I think more people will be attracted to the EME contest than lost. The lour of additional distant grids should not be underestimated. Much of the prime Moon time is in the wee hours of the morning when there is little or no tropo activity. It thus should be possible to operate and do well in both contests with proper strategy (and lack of sleep). There is the 2nd EME Contest weekend. The EME contest also starts before the tropo contest while the tropo contest continues beyond the end of the EME portion. Basically I believe that the whole can be more than the sum of the parts in this case. A negative pointed out by K0RZ for the 5/6 Dec date proposed by Steve is that it corresponds with the ARRL's 160 m contest. It amazing how many EMEers are also 160 m buffs.

I have run out of time again. Please keep the info coming. We need more technical pieces. PA3CSG submitted an article which will probably appear in the next NL. I am waiting for the graphics to arrive. CU you off the Moon during the 1st night of the Jan SW and the VHF contest on the following weekend. Don't forget to get your info into the Paris EME Conference. Best Holiday Greeting,

Happy New Year and 73, Al-K2UYH



[Pictures of JL1ZCG with 960 elements on 1296.](#)

432MHz & up EME skeds

Skeds for JAN 9

Time	432.040	2304.050
2300z		G3LTF -SM3AKW
2330z	CT1DMK-OK1KIR	G3LTF -HB9SV

Skeds for JAN 10

Time	432.035	432.040	432.070	2304.050
0000z		K1FO -DF4UE		
0030z		K3HZO -G3LTF		
0100z		K1FO -DL5FN		K2DH -G3LTF
0130z		K1FO -YL3AG		WA8WZG-G3LTF
0200z			W7QX -DL9NDD	
0300z	LU4HO -N4GJV			
0330z	DL9EBF-N4GJV			
0400z	DH5NAH-N4GJV	W7QX -K3HZO		
0430z		W7CI -K3HZO		
0530z		W0KJY -HP3XUG		
0600z		W7QX -HP3XUG		
0630z			7M2PDT-HP3XUG	
0730z		JA9BOH-HP3XUG		
1530z			DL9NDD-JH1EFA	
1600z			DL9NDD-JA2TY	
1630z			DL9NDD-JA5NNS	
1700z			DL5FN -7M2PDT	
2100z		PY5ZBU-IW5AVM		
2130z		K1FO -DL9EBF		
2200z		K1FO -LA4GA		
2230z		K9BCT -DL9NDD		
2300z		K3HZO -DK3WG		
2330z		PY5ZBU-DK3FB	WB4BKC-DK3WG	

Skeds for JAN 11

Time	432.040	432.045	1296.050	1296.075
0000z	W1ZX -ON5OF	K3HZO -S52CW	W3XS -ZS6AXT	VE6TA -DD1XF
0030z	W1ZX -W5ZN	K3HZO -ON4KNG	K9BCT -ZS6AXT	
0100z	K3HZO -PY5ZBU	KD4LT -S52CW	K9BCT -G3LTF	KB0PYO-ZS6AXT
0130z	K2DH -PY5ZBU	K3HZO -HP3XUG	KD4LT -G3LTF	
0200z	WA8WZG-DK3FB	WB4BKC-W1ZX	KB0PYO-G3LTF	
0230z	W7QX -DK3FB			
0300z	K7XD -DL9KR			
0330z	W7FN -DK3FB			
0400z	KA0RYT-PY5ZBU	K5WXN -I5TDJ		VE6TA - WA8WZG

0430z		VE6TA -KD4LT
0500z		VE6TA -W4OP
0530z		VE6TA -W4RDI
2130z		G3LTF -9H1ES
2200z	K3HZO -G3SEK	
2330z		KD4LT -ZS6AXT

Skeds for JAN 12

Time	1296.050
0100z	KD4LT -PY5ZBU

*** LUNAR WEEKEND CALENDAR FOR 1998 ***

by G3SEK

At 2400 Sat/ 0000 Sun	Declination (deg)	Signals (dB)	Sun offset (deg)	Sky temp (K, 432MHz)	Comments *
Jan-03/04	-3.8	1.0	+69	19	Moon in south.
Jan-10/11 ***	18.6	0.1	+158	34	Night.
Jan-17/18	2.5	-0.9	-121	15	Night. Apogee.
Jan-24/25	-18.2	-0.1	-42	91	Moon in south.
Feb-00/01	-0.7	1.0	+51	20	Moon in south.
Feb-07/08 ***	18.5	0.0	+140	31	Night.
Feb-14/15	0.0	-0.9	-141	20	Moon in south.
Feb-21/22	-18.5	0.0	-62	124	Moon in south.
Mar-00/01	2.2	1.0	+32	19	Day(PM).
Mar-07/08 ***	18.0	-0.1	+122	20	Night.
Mar-14/15	-2.8	-0.9	-160	20	Moon in south.
Mar-21/22	-18.5	0.1	-82	124	Moon in south.
Mar-28/29	4.9	1.0	+13	20	Sun noise.
Apr-04/05 ***	17.1	-0.2	+104	14	Day(PM)
Apr-11/12	-5.5	-0.9	-176	20	Moon in south.
Apr-18/19	-18.2	0.1	-100	58	Moon in south.
Apr-25/26	7.4	0.9	-8	20	Sun noise.
May-02/03 ***	15.9	-0.3	+85	14	Day(PM).
May-09/10	-8.1	-0.9	+162	23	Moon in south.
May-16/17	-17.4	0.2	-117	58	Moon in south.
May-23/24	9.9	0.9	-26	22	Sun noise.
May-30/31 ***	14.5	-0.4	+67	13	Day(PM).
Jun-06/07	-10.5	-0.9	+144	26	Moon in south.
Jun-13/14	-16.0	0.3	-134	24	Moon in south.
Jun-20/21 ***	12.3	0.9	-43	24	Day(AM).
Jun-27/28	12.8	-0.5	+48	13	Day(PM).
Jul-04/05	-12.4	-0.8	+125	29	Moon in south.
Jul-11/12	-14.1	0.4	-151	20	Moon in south.
Jul-18/19 ***	14.5	0.8	-59	24	Day(AM).
Jul-25/26	10.8	-0.5	+29	14	Sun noise.

Aug-01/02	-14.2	-0.8	+106	29	Moon in south.
Aug-08/09	-11.9	0.5	-168	17	Moon in south.
Aug-15/16 ***	16.5	0.8	-75	27	Day(AM).
Aug-22/23	8.5	-0.6	+11	14	Sun noise.
Aug-29/30	-15.8	-0.7	+88	39	Moon in south.
Sep-05/06	-9.5	0.6	+173	16	Moon in south.
Sep-12/13 ***	18.0	0.7	-91	34	Day(AM).
Sep-19/20	5.8	-0.7	-8	15	Sun noise.
Sep-26/27	-17.2	-0.7	+69	39	Moon in south.
Oct-03/04	-7.1	0.7	+154	19	Moon in south.
Oct-10/11 ***	18.9	0.6	-109	34	Day(AM).
Oct-17/18	3.0	-0.7	-27	15	Sun noise.
Oct-24/25	-18.5	-0.6	+50	91	Moon in south.
Nov-00/01	-4.7	0.8	+135	19	Moon in south.
Nov-07/08 ***	19.4	0.5	-128	31	Night.
Nov-14/15	0.2	-0.8	-46	21	Day(AM).Apogee.
Nov-21/22	-19.3	-0.5	+31	124	Moon in south.
Nov-28/29	-1.9	0.8	+116	20	Moon in south.
Dec-05/06 ***	19.3	0.4	-148	20	Night.
Dec-12/13	-2.4	-0.8	-65	20	Moon in south.
Dec-19/20	-19.6	-0.5	+13	124	Moon in south.
Dec-26/27	1.2	0.9	+97	19	Day(PM).

* SUN OFFSET ...Night < Day(AM) < Sun noise >Day(PM)> Night...

-180deg.....120.....0.....0.....+30.....+120.....+180deg

Leave Contest Info or Comments to Allen Here

The LATEST on the The Paris EME Conference

This information was obtained from: [Scott, KD4LT](#)

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